Serial Number: 10/758,055 Filing Date: January 15, 2004

Title: METHOD FOR REDUCING SOCKET WARPAGE

Assignee: Intel Corporation

REMARKS

This responds to the Office Action mailed on April 27, 2006.

Claim 17 is amended, no claims are canceled, and no claims are added; as a result, claims 17-25 are now pending in this application.

§102 Rejection of the Claims

Claims 17-27 were rejected under 35 USC § 102(b) as anticipated by Tai U.S. Patent 5,443,591 (hereinafter "Tsai"). Applicants respectfully traverse the rejection for the reasons stated below.

Claim 17, as amended, recites forming "at least one groove in a socket housing contiguous to and in the same plane as a surface mount region for an electrical device."

Claim 20 recites forming "a pair of grooves in a socket housing contiguous to a surface mount region for an electrical device."

Tsai relates to a connector socket for connecting an electronic device with an electronic device or an electrical power source¹. The Tsai connector socket comprises a base frame 12 an operating lever 16 which is pivotally mounted to base frame 12 and a movable socket cover 20 for base frame 12². In Tsai no "surface mount region for an electrical device" is explicitly shown but the patent shows in Figure 9 a socket cover 20 and an electronic device (unnumbered) being connected" to the socket cover. Thus if one were to attempt to read claims 17 or 20 on Tsai, any "surface mount region for an electrical device" would necessarily be located on socket cover 20. Although the Office Action states⁴ that Tsai discloses "forming at least one groove in a socket housing 12 contiguous to a surface mount region for an electrical device," Tsai does not show forming any "grooves" in the structure (the socket cover 20) to which an electrical device is connect. In Tsai, the only groove mentioned in the Office Action is the a "dome shape groove

¹ Tsai. Col. 1, lines 5-7.

² Tsai, Col 3, lines 9-15, and Fig. 4.

³ Tsai, col 2, lines 56-60 and Fig. 9.

⁴ Office Action, psge 2, Numbered Section 3, first paragraph.

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34"⁵ of one of a pair of "holding bulges 32."⁶ That "groove" on the base frame 12 (which the Office Action calls "a socket housing") is clearly not "contiguous to a surface mount region" as claims 17 and 20 both require.

The remaining claims mentioned in the rejection are all dependent upon either claim 17 or claim 20 and allowable for the same reasons as those claims and more.

As explained above for an element of the claims, as well as for additional claim elements which are also not shown in Tsai, Applicant submits that Tsai does not show all of the elements present in claims 17-25, and that all of the claims are in condition for allowance.

Claims 17-25 were rejected under 35 USC § 102(b) as anticipated by Lai et al. U.S. 5,722,848 (hereinafter "Lai"). Applicants respectfully traverse the rejection as discussed below.

The Office Action contends that "Lai disclose the product by process including the forming at least one groove 13 or 4 in a socket housing 3 or 5 contiguous to a surface mount region for an electrical device 1, securing a rigid bar or shaft 11 into the groove to thereby ensure that the surface mount region is flat (see Fig. 2)⁷."

Applicants respectfully disagree that Lai shows any such thing. Lee shows a socket base 5 and cover 3, one end of pivotally linked to socket base 5 by an "additional restraint bar 11," the ends of which are secured by piers 4 which from base 5. As stated in Lai:

"...the receiving slot 13 comprises a sufficient depth for allowing the restraint bar 13 to move within the slot 13 in a front-to end direction without leaving the slot 13, when the cover 3 is slidably moved in the front-to-end direction with regard to the base 5 during rotation of the lever. Accordingly the engagement of the restraint bar 13 (sic 11), which is fixed to the base 5, with regard to the corresponding slot 13 in the cover 3, assures that the cover 3 will never be lifted with regard to the based 5.8"

⁵ Tsai, col. 4, lines 30-32.

⁶ Tsai, col. 4, lines 2225.

⁷ Office Action, page 3, Section 3, 2nd paragraph, lines 1-4.

⁸ Lai, col 2, lines 18-26.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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Applicant respectfully submits that slot 13 of Lai is not a "...groove formed in a socket housing contiguous to <u>and in the same plane as</u> a surface mount region" as amended claim 17 requires. In Lai, "...cover 3 forms a receiving slot 13 on the rear side for receiving such corresponding restraint bar 11 therein⁹. Slot 13 in Lai extends into a side edge of cover 2 and is not in the same plane as any surface mount area on the upper surface of cover 3.

Applicant respectfully submits that slot 13 of Lai is not a "pair of grooves" as claim 20 requires. Nor does restraint bar 11 of Lai read on the claimed "inserting rigid warpage reinforcement bars in the grooves" feature of that claim.

The Office Action also based the rejection upon the Fig. 4 embodiment of Lai stating¹⁰: "Noting another embodiment such as Fig. 4 depicts the above configurations where a groove is formed in the housing for securing the shaft therefrom". Fig. 4 depicts a single groove which does not anticipate "forming at least one groove in a socket housing contiguous to and in the same plane as a surface mount region" as claim 17 requires. Nor does it depict "forming a pair of grooves" as claim 20 requires.

The remaining claims mentioned in the rejection all dependent upon either claim 17 or claim 20 and allowable for the same reasons as those claims and more.

As explained above for specified elements of the claims, as well as for additional claim elements not shown in Tsai, Applicant submits that Tsai does not show all of the elements present in claims 17-25, and that all of the claims are in condition for allowance.

⁹ Lai, col. 2, lines 16-18.

¹⁰ Office Action, page 3, section 4, 2nd paragraph, lines 4-6.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6970) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date July 27 2006

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<u>CERTIFICATE UNDER 37 CFR 1.8:</u> The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexendria, VA 22313-1450 on this 27th day of July 2006.

Name

Signature